

PATENT ABSTRACTS OF JAPAN

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(71)Applicant : TAKARA CO LTD

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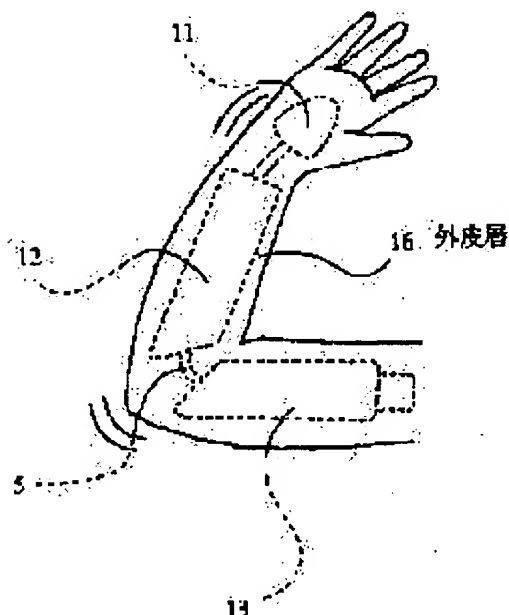
MATSUOKA HIROKAZU

(54) PRODUCTION OF DOLL BODY

(57)Abstract:

PROBLEM TO BE SOLVED: To enable the deformation in a natural form allowing bending in bending sections and prohibiting the bending in sections which are not ought to be bent and to reduce the size of a doll body.

SOLUTION: Skeleton members are insert molded apart prescribed intervals at a core material 5 of a metal wire or the like having flexibility by using skeleton part molding materials, by which skeleton parts in the state of connecting the skeleton members and the skeleton members by the core material 5 are formed. Outer membrane layers 16 are insert molded to these skeleton parts by using outer membrane molding materials.



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CLAIMS

[Claim(s)]

[Claim 1] The manufacture approach of the doll object characterized by having the following requirements.

(b) setting predetermined spacing to the core material which has the flexibility of a wire etc. using a frame section molding material, carrying out insert molding of the frame member, and carrying out insert molding of the envelope layer to the above-mentioned frame section using a forming-the frame section in condition that frame member and frame member were connected by core material (b) envelope layer molding material --

[claim 2] Said frame section molding material and said envelope layer molding material are the manufacture approach of a doll object according to claim 1 with compatibility.

[Claim 3] The manufacture approach of a doll object according to claim 1 or 2 that said frame section molding material is [said envelope layer molding material] an elastomer in polyolefin resin.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the manufacture approach of a turnable doll object from a predetermined part.

[0002]

[Description of the Prior Art] While an arm and a foot are formed possible [bending], making them deform and carrying out various postures conventionally, various clothes are dressed with, enjoyed, dressed with and changed, and doll play is accepted in the girl. As this doll is shown in drawing 6 (a), an arm 21 and the leg 22 are connected rotatable, further, an arm 21 is formed in idiosoma 20 possible [bending] from an elbow 23, and the leg 22 is formed in it possible [bending] from the knee 24.

[0003]

[Problem(s) to be Solved by the Invention] However, when an above-mentioned doll is dressed with clothes Even if it dresses with long-sleeved dress and a part for the flexion of a shoulder or an elbow can prevent from exposing in the case of the doll with which the doll imitated the girl When a skirt board was made to wear, it could not avoid, but as shown in drawing 6 (b), the structure of the joint part of a knee 24 could not but be exposed, and exposure of a part in the knees could not but become an unnatural doll. Therefore, the doll which the structure of a joint part does not expose is indicated by the Japanese-Patent-Application-No. No. 179603 [61 to] official report. Although the condition of this doll having prepared the elasticity resin layer for an arm or the leg in the interior of the envelope layer made of synthetic resin and this envelope layer, and having laid flexible core materials, such as a wire, underground inside the elasticity resin layer further, and having bent the condition of having bent since the core material memorized the configuration can be held The straight part was not limited and had the problem which there is a limitation also in crookedness of an elasticity resin layer, and adopts the unnatural way of being straight.

[0004] This invention can make it deform in the natural form at which it does not turn by

the part which must not turn at by the part which cancels the above-mentioned trouble and is bent, and which must not be bent, and, moreover, let it be the technical problem to offer the manufacture approach of a doll object that a miniaturization can be attained.

[0005]

[Means for Solving the Problem] In order to solve said technical problem, the manufacture approach of the doll object concerning this invention is characterized by having the following requirements.

(b) Set predetermined spacing to the core material which has the flexibility of a wire etc. using a frame section molding material, and carry out insert molding of the frame member to it. it is that a frame member and a frame member carry out insert molding of the envelope layer to the above-mentioned frame section using a forming-the frame section in condition of having been connected by core material (b) envelope layer molding material -- As for said frame section molding material and said envelope layer molding material, it is desirable that there is compatibility and a frame member and an envelope layer weld at the time of shaping.

[0006] And said frame section molding material should just be [said envelope layer molding material] an elastomer in polyolefin resin.

[0007]

[Embodiment of the Invention] The 1st mold 2 which a sign 1 shows the 1st metal mold in the case of fabricating an arm by the manufacture approach of the doll object of this invention in drawing 1 , and fabricates the 1st frame member which imitated the bone of hand to this 1st metal mold, The 2nd mold 3 which fabricates the 2nd frame member which imitated the radius, and the 3rd mold 4 which fabricates the 3rd frame member which imitated the humerus are formed. Insert molding of the frame section 10 is carried out using the frame section molding material which consists of polyolefin resin, such as polypropylene, by making into a core material 5 the wire which has flexibility.

[0008] The frame section 10 fabricated as an insertion a core material 5 using the above-mentioned metal mold As shown in drawing 2 , predetermined spacing is set by making a wire etc. into a core material 5. The 1st frame member 11, When the 2nd frame member 12 and the 3rd frame member 13 are formed, the part which the core material 5 exposed corresponds to the joint sections, such as the wrist section and the elbow section, respectively and the frame section 10 is bent, it bends from the part of the exposed core material 5, and is made not to turn at each frame member.

[0009] As shown in drawing 3 R> 3 by considering the above-mentioned frame section 10 as an insertion, it sets to the 2nd metal mold 15, and the envelope layer 16 is fabricated around the frame section 10 by insert molding using the envelope layer molding material which consists of estramer. under the present circumstances -- since the molding material of the envelope layer 16 and the molding material of the frame section 10 use the material which has compatibility -- the envelope layer 16 and the 1- without the frame section 10 and the envelope layer 16 separating, when it will weld and an arm is bent, it coordinates and the 3rd frame member 12-13 deforms. moreover, the 1- since it bends in the part of the wire 5 equivalent to the joint section and does not turn at a frame member, when it bends, since the 3rd frame member 11-13 is hard -- an arm -- on the way -- since -- it does not bend or unnatural deformation at which it turns as the whole arm curves is not carried out

[0010] Moreover, you may fabricate by the insert molding of the duplex which

mentioned the whole doll object above.

[0011] In this case, as shown in drawing 5, insert molding of the frame section 10 which forms the frame of the whole body beforehand by the core materials 5, such as a wire, and consists of many frame members 20 by considering this frame as an insertion is carried out, and insert molding of the envelope layer 16 is carried out by considering the fabricated frame section 10 as an insertion.

[0012] Thus, since it turns at the place at which it should turn and does not turn at the place at which I do not want you to turn, while the fabricated doll object can attain a miniaturization, also when making it deform, bending from an unnatural place can be lost, natural deformation can be carried out, though it is small, deformation without a big doll and inferiority can be carried out, and doll play can be made much more pleasant.

[0013]

[Effect of the Invention] Since it bends from a joint part certainly when making the arm of a doll etc. bend and deform, since there is no frame member in the part which fabricates a frame member to the core material which has flexibility, and is equivalent to a joint according to invention of claim 1, it cannot bend from an unnatural part, or it cannot bend so that it may curve, and a real feeling can be raised in spite of easy structure.

[0014] Since the contact surface of a frame member and an envelope layer welds when insert molding of the envelope layer is carried out by considering the frame section as an insertion, since the ingredient which fabricates a frame member and an envelope layer has compatibility according to invention of claim 2, as the frame section did not shift in the envelope layer, when an arm etc. is bent, natural deformation can be carried out, and doll play can be made more pleasant.

[0015] According to invention of claim 3, the doll object with a sufficient feel which moreover deforms in a natural form can be formed.

TECHNICAL FIELD

[Field of the Invention] This invention relates to the manufacture approach of a turnable doll object from a predetermined part.

PRIOR ART

[Description of the Prior Art] While an arm and a foot are formed possible [bending], making them deform and carrying out various postures conventionally, various clothes are dressed with, enjoyed, dressed with and changed, and doll play is accepted in the girl. As this doll is shown in drawing 6 (a), an arm 21 and the leg 22 are connected rotatable, further, an arm 21 is formed in idiosoma 20 possible [bending] from an elbow 23, and the leg 22 is formed in it possible [bending] from the knee 24.

EFFECT OF THE INVENTION

[Effect of the Invention] Since it bends from a joint part certainly when making the arm of a doll etc. bend and deform, since there is no frame member in the part which fabricates a frame member to the core material which has flexibility, and is equivalent to

a joint according to invention of claim 1, it cannot bend from an unnatural part, or it cannot bend so that it may curve, and a real feeling can be raised in spite of easy structure.

[0014] Since the contact surface of a frame member and an envelope layer welds when insert molding of the envelope layer is carried out by considering the frame section as an insertion, since the ingredient which fabricates a frame member and an envelope layer has compatibility according to invention of claim 2, as the frame section did not shift in the envelope layer, when an arm etc. is bent, natural deformation can be carried out, and doll play can be made more pleasant.

[0015] According to invention of claim 3, the doll object with a sufficient feel which moreover deforms in a natural form can be formed.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, when an above-mentioned doll is dressed with clothes Even if it dresses with long-sleeved dress and a part for the flexion of a shoulder or an elbow can prevent from exposing in the case of the doll with which the doll imitated the girl When a skirt board was made to wear, it could not avoid, but as shown in drawing 6 (b), the structure of the joint part of a knee 24 could not but be exposed, and exposure of a part in the knees could not but become an unnatural doll. Therefore, the doll which the structure of a joint part does not expose is indicated by the Japanese-Patent-Application-No. No. 179603 [61 to] official report. Although the condition of this doll having prepared the elasticity resin layer for an arm or the leg in the interior of the envelope layer made of synthetic resin and this envelope layer, and having laid flexible core materials, such as a wire, underground inside the elasticity resin layer further, and having bent the condition of having bent since the core material memorized the configuration can be held The straight part was not limited and had the problem which there is a limitation also in crookedness of an elasticity resin layer, and adopts the unnatural way of being straight.

[0004] This invention can make it deform in the natural form at which it does not turn by the part which must not turn at by the part which cancels the above-mentioned trouble and is bent, and which must not be bent, and, moreover, let it be the technical problem to offer the manufacture approach of a doll object that a miniaturization can be attained.

MEANS

[Means for Solving the Problem] In order to solve said technical problem, the manufacture approach of the doll object concerning this invention is characterized by having the following requirements.

(b) Set predetermined spacing to the core material which has the flexibility of a wire etc. using a frame section molding material, and carry out insert molding of the frame member to it. it is that a frame member and a frame member carry out insert molding of the envelope layer to the above-mentioned frame section using a forming-the frame section in condition of having been connected by core material (b) envelope layer molding material -- As for said frame section molding material and said envelope layer molding material, it is desirable that there is compatibility and a frame member and an

envelope layer weld at the time of shaping.

[0006] And said frame section molding material should just be [said envelope layer molding material] an elastomer in polyolefin resin.

[0007]

[Embodiment of the Invention] The 1st mold 2 which a sign 1 shows the 1st metal mold in the case of fabricating an arm by the manufacture approach of the doll object of this invention in drawing 1 , and fabricates the 1st frame member which imitated the bone of hand to this 1st metal mold, The 2nd mold 3 which fabricates the 2nd frame member which imitated the radius, and the 3rd mold 4 which fabricates the 3rd frame member which imitated the humerus are formed. Insert molding of the frame section 10 is carried out using the frame section molding material which consists of polyolefin resin, such as polypropylene, by making into a core material 5 the wire which has flexibility.

[0008] The frame section 10 fabricated as an insertion a core material 5 using the above-mentioned metal mold As shown in drawing 2 , predetermined spacing is set by making a wire etc. into a core material 5. The 1st frame member 11, When the 2nd frame member 12 and the 3rd frame member 13 are formed, the part which the core material 5 exposed corresponds to the joint sections, such as the wrist section and the elbow section, respectively and the frame section 10 is bent, it bends from the part of the exposed core material 5, and is made not to turn at each frame member.

[0009] As shown in drawing 3 R> 3 by considering the above-mentioned frame section 10 as an insertion, it sets to the 2nd metal mold 15, and the envelope layer 16 is fabricated around the frame section 10 by insert molding using the envelope layer molding material which consists of elastomer. under the present circumstances -- since the molding material of the envelope layer 16 and the molding material of the frame section 10 use the material which has compatibility -- the envelope layer 16 and the 1- without the frame section 10 and the envelope layer 16 separating, when it will weld and an arm is bent, it coordinates and the 3rd frame member 12-13 deforms. moreover, the 1- since it bends in the part of the wire 5 equivalent to the joint section and does not turn at a frame member, when it bends, since the 3rd frame member 11-13 is hard -- an arm -- on the way -- since -- it does not bend or unnatural deformation at which it turns as the whole arm curves is not carried out

[0010] Moreover, you may fabricate by the insert molding of the duplex which mentioned the whole doll object above.

[0011] In this case, as shown in drawing 5 , insert molding of the frame section 10 which forms the frame of the whole body beforehand by the core materials 5, such as a wire, and consists of many frame members 20 by considering this frame as an insertion is carried out, and insert molding of the envelope layer 16 is carried out by considering the fabricated frame section 10 as an insertion.

[0012] Thus, since it turns at the place at which it should turn and does not turn at the place at which I do not want you to turn, while the fabricated doll object can attain a miniaturization, also when making it deform, bending from an unnatural place can be lost, natural deformation can be carried out, though it is small, deformation without a big doll and inferiority can be carried out, and doll play can be made much more pleasant.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The perspective view showing an example of the 1st metal mold used by the manufacture approach of the doll object concerning this invention

[Drawing 2] The perspective view of the frame section fabricated with the above-mentioned metal mold

[Drawing 3] The perspective view showing the condition of having set the above-mentioned frame section to the 2nd metal mold

[Drawing 4] The perspective view showing the deformation condition of the arm fabricated by the manufacture approach of the above-mentioned doll object

[Drawing 5] The front view of the doll fabricated by the manufacture approach of the above-mentioned doll object

[Drawing 6] (a) and (b) are the explanatory view of the conventional doll object.

[Description of Notations]

5 Core Material

10 Frame Section

16 Envelope Layer

CORRECTION OR AMENDMENT

[Kind of official gazette] Printing of amendment by the convention of 2 of Article 17 of Patent Law

[Section partition] The 2nd partition of the 1st section

[Publication date] March 21, Heisei 13 (2001. 3.21)

[Publication No.] JP,2000-61151,A (P2000-61151A)

[Date of Publication] February 29, Heisei 12 (2000. 2.29)

[Annual volume number] Open patent official report 12-612

[Application number] Japanese Patent Application No. 10-238337

[The 7th edition of International Patent Classification]

A63H 9/00

3/04

[FI]

A63H 9/00 L

3/04 Z

[Procedure revision]

[Filing Date] June 16, Heisei 12 (2000. 6.16)

[Procedure amendment 1]

[Document to be Amended] Specification

[Item(s) to be Amended] 0013

[Method of Amendment] Modification

[Proposed Amendment]

[0013]

[Effect of the Invention] Since it bends from a joint part certainly when making the arm of a doll etc. bend and deform, since there is no frame member in the part which

fabricates a frame member to the core material which has flexibility, and is equivalent to a joint according to invention of claim 1, it cannot bend from an unnatural part, or it cannot bend so that it may curve, and a real feeling can be raised in spite of easy structure. And although the straight part and the straight part have clarified, an appearance is that (there is no relation like before) which does not change at all, and does not spoil an appearance.

CORRECTION OR AMENDMENT

[Kind of official gazette] Printing of amendment by the convention of 2 of Article 17 of Patent Law

[Section partition] The 2nd partition of the 1st section

[Publication date] June 5, Heisei 13 (2001. 6.5)

[Publication No.] JP,2000-61151,A (P2000-61151A)

[Date of Publication] February 29, Heisei 12 (2000. 2.29)

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[Application number] Japanese Patent Application No. 10-238337

[The 7th edition of International Patent Classification]

A63H 9/00

3/04

[FI]

A63H 9/00 L

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[Procedure revision]

[Filing Date] June 22, Heisei 12 (2000. 6.22)

[Procedure amendment 1]

[Document to be Amended] Specification

[Item(s) to be Amended] 0013

[Method of Amendment] Modification

[Proposed Amendment]

[0013]

[Effect of the Invention] Since it bends from a joint part certainly when making the arm of a doll etc. bend and deform, since there is no frame member in the part which fabricates a frame member to the core material which has flexibility, and is equivalent to a joint according to invention of claim 1, it cannot bend from an unnatural part, or it cannot bend so that it may curve, and a real feeling can be raised in spite of easy structure. And although the straight part and the part not bending have clarified, an appearance is that (there is no relation like before) which does not change at all, and does not spoil an appearance.

CORRECTION OR AMENDMENT

[Kind of official gazette] Printing of amendment by the convention of 2 of Article 17 of Patent Law

[Section partition] The 2nd partition of the 1st section

[Publication date] July 24, Heisei 13 (2001. 7.24)

[Publication No.] JP,2000-61151,A (P2000-61151A)

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[Application number] Japanese Patent Application No. 10-238337

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[FI]

A63H 9/00

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3/04

Z

[Procedure revision]

[Filing Date] September 5, Heisei 12 (2000. 9.5)

[Procedure amendment 1]

[Document to be Amended] Specification

[Item(s) to be Amended] Whole sentence

[Method of Amendment] Modification

[Proposed Amendment]

[Document Name] Specification

[Title of the Invention] The manufacture approach of a doll object

[Claim(s)]

[Claim 1] The manufacture approach of the doll object characterized by having the following requirements.

(b) Form the frame section in the condition that set predetermined spacing to the core material which a wire etc. can bend using the frame section molding material, carried out insert molding of the frame member, and the frame member and the frame member were connected with the charge of a core material.

(b) Carry out insert molding of the envelope layer to the above-mentioned frame section using an envelope layer molding material.

(c) The above-mentioned frame section molding material and the above-mentioned envelope layer molding material are that there is compatibility.

[Claim 2] The manufacture approach of a doll object according to claim 1 that said frame section molding material is [said envelope layer molding material] an elastomer in polyolefin resin.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the manufacture approach of a turnable doll object from a predetermined part.

[0002]

[Description of the Prior Art] While an arm and a foot are formed possible [bending], making them deform and carrying out various postures conventionally, various clothes are dressed with, enjoyed, dressed with and changed, and doll play is accepted in the girl. As this doll is shown in drawing 6 (a), an arm 21 and the leg 22 are connected rotatable, further, an arm 21 is formed in idiosoma 20 possible [bending] from an elbow 23, and the leg 22 is formed in it possible [bending] from the knee 24.

[0003]

[Problem(s) to be Solved by the Invention] However, when an above-mentioned doll is dressed with clothes Even if it dresses with long-sleeved dress and a part for the flexion of a shoulder or an elbow can prevent from exposing in the case of the doll with which the doll imitated the girl When a skirt board was made to wear, it could not avoid, but as shown in drawing 6 (b), the structure of the joint part of a knee 24 could not but be exposed, and exposure of a part in the knees could not but become an unnatural doll. Therefore, the doll which the structure of a joint part does not expose is indicated by the Japanese-Patent-Application-No. No. 179603 [61 to] official report. Although the condition of this doll having prepared the elasticity resin layer for an arm or the leg in the interior of the envelope layer made of synthetic resin and this envelope layer, and having laid flexible core materials, such as a wire, underground inside the elasticity resin layer further, and having bent the condition of having bent since the core material memorized the configuration can be held The straight part was not limited and had the problem which there is a limitation also in crookedness of an elasticity resin layer, and adopts the unnatural way of being straight.

[0004] This invention can make it deform in the natural form at which it does not turn by the part which must not turn at by the part which cancels the above-mentioned trouble and is bent, and which must not be bent, and, moreover, let it be the technical problem to offer the manufacture approach of a doll object that a miniaturization can be attained.

[0005]

[Means for Solving the Problem] In order to solve said technical problem, the manufacture approach of the doll object concerning this invention is characterized by having the following requirements.

(b) Form the frame section in the condition that set predetermined spacing to the core material which a wire etc. can bend using the frame section molding material, carried out insert molding of the frame member, and the frame member and the frame member were connected with the charge of a core material.

(b) Carry out insert molding of the envelope layer to the above-mentioned frame section using an envelope layer molding material.

(c) The above-mentioned frame section molding material and the above-mentioned envelope layer molding material are that there is compatibility.

[0006] And said frame section molding material should just be [said envelope layer molding material] an elastomer in polyolefin resin.

[0007]

[Embodiment of the Invention] The 1st mold 2 which a sign 1 shows the 1st metal mold in the case of fabricating an arm by the manufacture approach of the doll object of this invention in drawing 1, and fabricates the 1st frame member which imitated the bone of hand to this 1st metal mold, The 2nd mold 3 which fabricates the 2nd frame member which imitated the radius, and the 3rd mold 4 which fabricates the 3rd frame member which imitated the humerus are formed. Insert molding of the frame section 10 is carried out using the frame section molding material which consists of polyolefin resin, such as polypropylene, by making into a core material 5 the wire which has flexibility.

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12 and the 3rd frame member 13 are formed, the part which the core material 5 exposed corresponds to the joint sections, such as the wrist section and the elbow section, respectively and the frame section 10 is bent, it bends from the part of the exposed core material 5, and is made not to turn at each frame member.

[0009] As shown in drawing 3 by considering the above-mentioned frame section 10 as an insertion, it sets to the 2nd metal mold 15, and the envelope layer 16 is fabricated around the frame section 10 by insert molding using the envelope layer molding material which consists of estramer. under the present circumstances -- since the molding material of the envelope layer 16 and the molding material of the frame section 10 use the material which has compatibility -- the envelope layer 16 and the 1- without the frame section 10 and the envelope layer 16 separating, when it will weld and an arm is bent, it coordinates and the 3rd frame member 12-13 deforms. moreover, the 1- since it bends in the part of the wire 5 equivalent to the joint section and does not turn at a frame member, when it bends, since the 3rd frame member 11-13 is hard -- an arm -- on the way -- since -- it does not bend or unnatural deformation at which it turns as the whole arm curves is not carried out

[0010] Moreover, you may fabricate by the insert molding of the duplex which mentioned the whole doll object above.

[0011] In this case, as shown in drawing 5, insert molding of the frame section 10 which forms the frame of the whole body beforehand by the core materials 5, such as a wire, and consists of many frame members 20 by considering this frame as an insertion is carried out, and insert molding of the envelope layer 16 is carried out by considering the fabricated frame section 10 as an insertion.

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[0013]

[Effect of the Invention] Since it bends from a joint part certainly when making the arm of a doll etc. bend and deform, since there is no frame member in the part which fabricates a frame member to the core material which has flexibility, and is equivalent to a joint according to invention of claim 1, it cannot bend from an unnatural part, or it cannot bend so that it may curve, and a real feeling can be raised in spite of easy structure. And although the straight part and the part not bending have clarified, an appearance is that (there is no relation like before) which does not change at all, and does not spoil an appearance. Furthermore, since the contact surface of a frame member and an envelope layer welds when insert molding of the envelope layer is carried out by considering the frame section as an insertion, since the ingredient which fabricates a frame member and an envelope layer has compatibility, as the frame section did not shift in the envelope layer, when an arm etc. is bent, natural deformation can be carried out, and doll play can be made more pleasant.

[0014] According to invention of claim 2, the doll object with a sufficient feel which moreover deforms in a natural form can be formed.

[Brief Description of the Drawings]

[Drawing 1] The perspective view showing an example of the 1st metal mold used by the

manufacture approach of the doll object concerning this invention

[Drawing 2] The perspective view of the frame section fabricated with the above-mentioned metal mold

[Drawing 3] The perspective view showing the condition of having set the above-mentioned frame section to the 2nd metal mold

[Drawing 4] The perspective view showing the deformation condition of the arm fabricated by the manufacture approach of the above-mentioned doll object

[Drawing 5] The front view of the doll fabricated by the manufacture approach of the above-mentioned doll object

[Drawing 6] (a) and (b) are the explanatory view of the conventional doll object.

[Description of Notations]

5 Core Material

10 Frame Section

16 Envelope Layer

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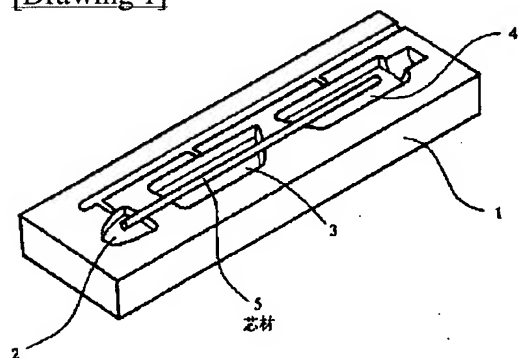
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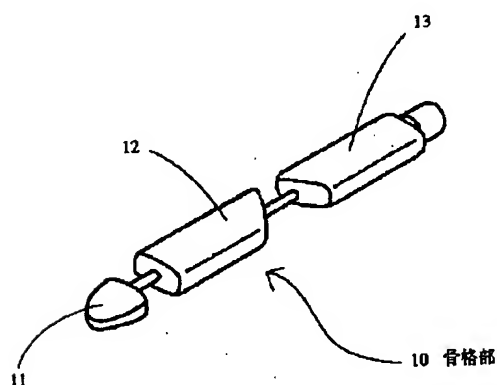
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

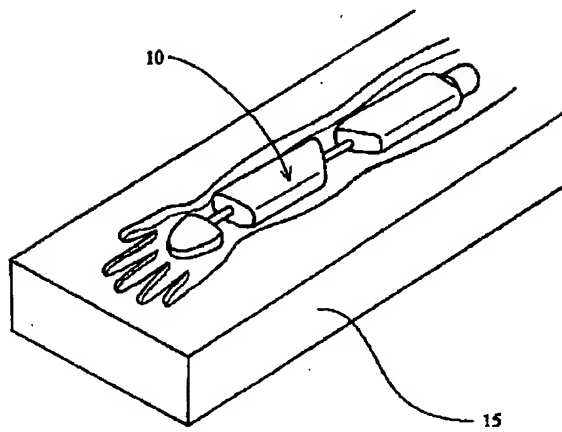
[Drawing 1]



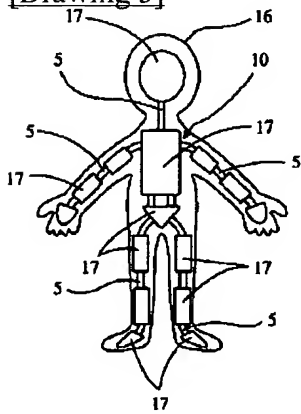
[Drawing 2]



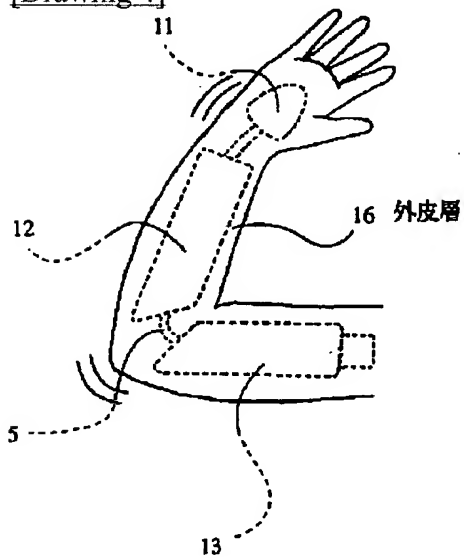
[Drawing 3]



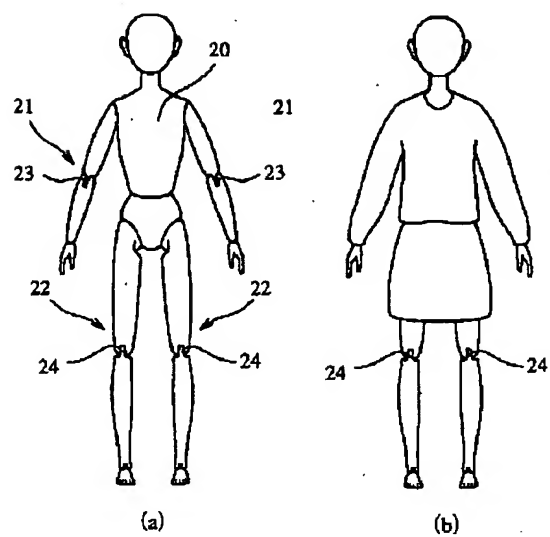
[Drawing 5]



[Drawing 4]



[Drawing 6]



[Translation done.]

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